

What is claimed is:

1. Apparatus comprising:

a biocompatible cylindrical introducer member with an outer wall and a hollow
5 core, the cylindrical member having a longitudinal axis and an opening along a side; and
biocompatible means positioned in the introducer member for cutting tissue
entering the opening as the means for cutting travels with respect to the opening.

2. Apparatus according to claim 1 further including means for coagulating blood in cut
10 tissue so that the coagulation operation occurs immediately after or simultaneously with
cutting the tissue.

3. Apparatus according to claim 1 further wherein the means for cutting is a wire or
ceramic or silicon or metal.

4. Apparatus according to claim 3 further including means for applying ultrasonic energy
to the wire to facilitate cutting.

5. Apparatus according to claim 1 further wherein the means for cutting further operates
20 to coagulate blood in cut tissue.

6. Apparatus according to claim 1 further wherein the means for cutting comprises a
cutting surface formed from or supported along the edge of a wall of a hollow tube such
that rotating the tube in the introducer member causes the cutting surface to move in a
25 direction that is both in part parallel to the longitudinal axis and transverse to the
longitudinal axis.

7. Apparatus according to claim 4 wherein the ultrasonic energy assists in coagulating
blood.

8. Apparatus according to claim 6 further including means for coagulating blood that is positioned adjacent to and behind the leading edge of the cutting surface.

9. A method, comprising:

5 positioning in a body a biocompatible cylindrical introducer member with an outer wall and a hollow core, the cylindrical member having a longitudinal axis and an opening along a side; and

using a cutting member positioned in the introducer, cutting tissue entering the opening by moving the cutting member with respect to the opening.

10

10. A method according to claim 9 further including means for coagulating blood in cut tissue so that the coagulation operation occurs immediately after or simultaneously with cutting the tissue.

15

11. A method according to claim 9 further wherein a wire is used as a cutting member.

12. A method according to claim 3 further including applying ultrasonic energy to the wire to facilitate cutting.

20

13. A method according to claim 9 further wherein the cutting member is also used to coagulate blood in cut tissue.

25

14. A method according to claim 9 further wherein the cutting member comprises a cutting surface formed from or supported along the edge of a wall of a hollow tube and including rotating the tube in the introducer member to cause the cutting surface to travel in a direction that is both in part parallel to the longitudinal axis and transverse to the longitudinal.

30

15. A method according to claim 12 wherein the ultrasonic energy assists in coagulating blood.

16. A method according to claim 14 further coagulating blood using a member that is positioned adjacent to and behind the leading edge of the cutting surface.

5 17. Apparatus comprising:

a biocompatible cylindrical introducer member with an outer wall and a hollow core, the cylindrical member having a longitudinal axis and an opening along a side;

a biocompatible cylindrical inner member with an outer wall and a hollow core, the cylindrical member having a longitudinal axis and an opening along a side and sized
10 to fit inside the introducer member; and

means for cutting tissue entering the opening in the inner member as the means for cutting travels with respect to the opening in the inner member.

18. Apparatus according to claim 17 further including means for coagulating blood in cut
15 tissue so that the coagulation operation occurs immediately after or simultaneously with cutting the tissue.

19. Apparatus according to claim 17 further wherein the means for cutting is a wire or ceramic or silicon or metal.

20. Apparatus according to claim 19 further including means for applying ultrasonic
20 energy to the wire to facilitate cutting.

21. Apparatus according to claim 17 further wherein the means for cutting further
25 operates to coagulate blood in cut tissue.

22. Apparatus according to claim 20 wherein the ultrasonic energy assists in coagulating blood.

30

ADD
a17